

7 September 2010

## GALAXY LAUNCHES “EV GRADE” LITHIUM CARBONATE

### Highlights

- Galaxy launches commercial production capability of highest battery grade lithium carbonate
- Jiangsu plant design modified to produce “EV Grade” and “EV Plus Grade”, attracting higher market price
- Galaxy guarantees consistent and long term supply of high purity lithium carbonate through its fully automated and computer controlled processing plant
- Galaxy positioning itself to meet stringent quality demands of electric vehicle industry

Emerging lithium producer, **Galaxy Resources Limited (ASX: GXY)**, is pleased to advise that the Company has launched two high grade lithium carbonate products tailored specifically for lithium batteries to be used in the production of electric vehicles (EVs). These new categories will be branded ‘EV Grade’ (99.9% lithium carbonate) and ‘EV Plus Grade’ (99.99% lithium carbonate) representing a key niche product offering for the electric vehicle market.

Galaxy Resources Managing Director, Mr Iggy Tan, said the Company has modified its Jiangsu Lithium Carbonate Plant process design to allow for the full production capacity of 17,000 tonnes per annum of ‘EV Grade’ lithium carbonate. In addition, the plant will also have capacity to produce a limited amount of the higher purity ‘EV Plus Grade’.

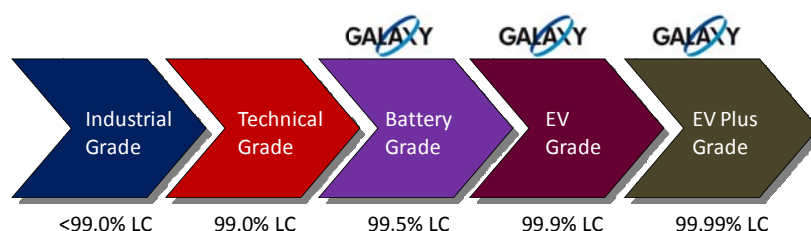
“Battery Grade (99.5% lithium carbonate) is currently the standard grade for battery applications, but there is limited production capacity amongst the world’s major lithium carbonate producers,” Mr Tan said.

“Production of ‘EV Grade’ and ‘EV Plus Grade’ lithium carbonate is minimal and restricted to small niche batch refiners supplying the cathode and electrolyte segment of the battery industry. Galaxy believes the electric vehicle industry will demand higher quality cathodes for battery production. We are already seeing the need for battery makers to supply smaller batteries with higher power and energy densities. This trend will increase as the demand for EV’s pick up.

“Galaxy is positioning itself to be a world leader and meet this future demand growth by building a plant that has the capacity to consistently produce these high purity lithium carbonate products,” he said.



Different Lithium Carbonate Grades

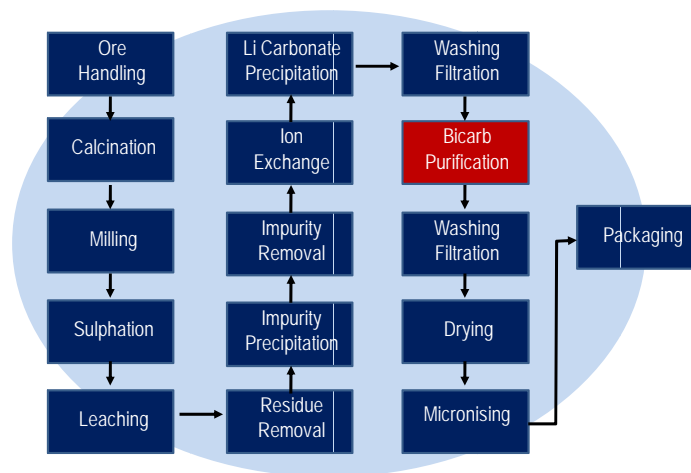


### Jiangsu Lithium Carbonate Plant

The previous process design enabled the Company to comfortably produce commercial quantities of 'Battery Grade'. However, the Company has taken the opportunity to modify the process plant by incorporating an additional bicarbonate purification step to enable production of 'EV Grade' and 'EV Plus Grade' lithium carbonate.

The bicarbonate purification process is conventional and is already adopted by smaller batch refiners in the industry. The process involves the re-dissolution of lithium carbonate with carbon dioxide to form soluble lithium bicarbonate. The re-crystallisation of high purity lithium carbonate is affected through heating. By adopting this process the quality of the lithium carbonate can be dramatically improved.

Galaxy's process is as follows:



Mr Tan said that Galaxy will be one of the first in the world to produce 'EV Grade' in large volumes and is set to capitalise on the increased prices for the higher grade product. Currently, 'EV Grade' and 'EV Plus Grade' attracts a premium price in the region of US\$3,000/t and US\$10,000/t respectively over the standard 'Battery Grade'.

### Testwork Program

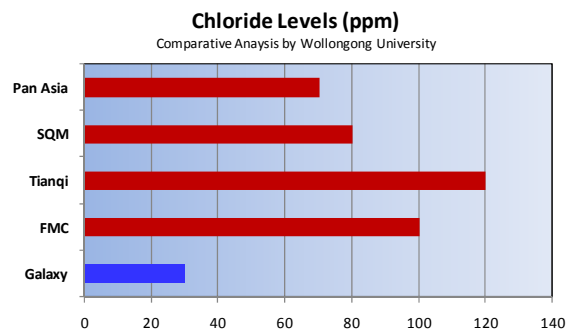
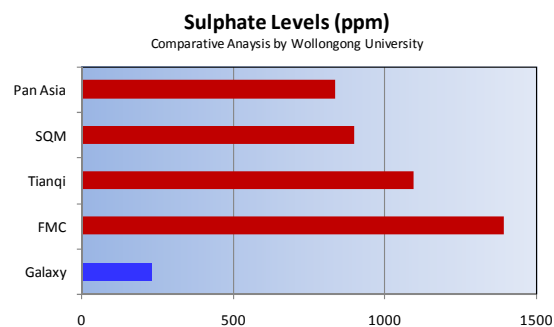
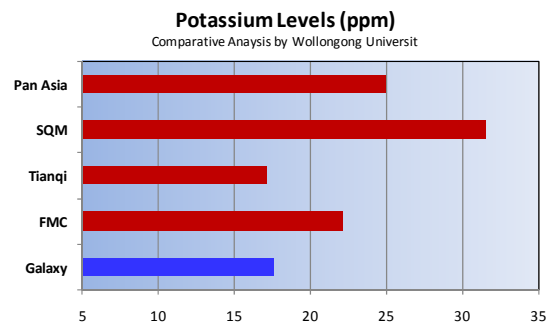
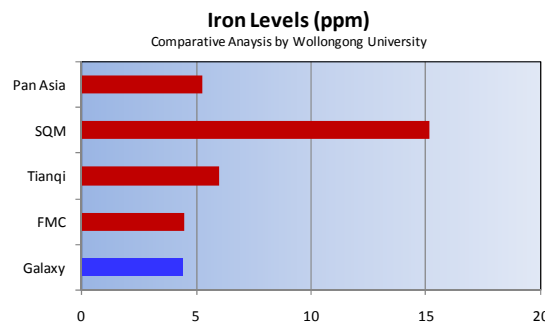
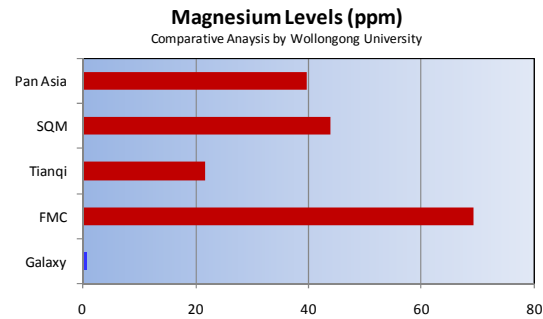
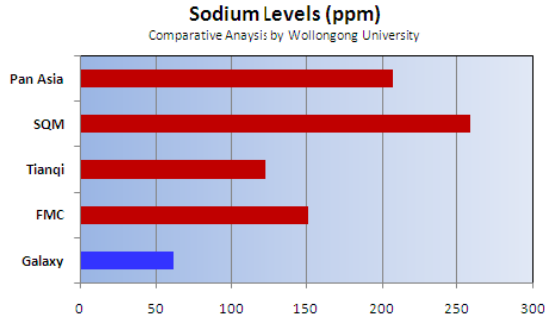
The following table is Galaxy's proposed 'EV Grade' product capability (produced by laboratory pilot work) compared with the highest quality lithium carbonate commercially available from major suppliers around the world. The impurity elements highlighted in the table below are important considerations for a cathode and battery producer, as they impact final battery performance and stability.

Table 1 - Comparison of Competitor Lithium Carbonate Quality vs Galaxy's EV Grade

	Galaxy	SQM	FMC	Pan Asia	Tianqi
Sodium	62 ppm	259 ppm	152 ppm	207 ppm	122 ppm
Magnesium	0.8 ppm	44 ppm	69 ppm	40 ppm	22 ppm
Potassium	18 ppm	32 ppm	22 ppm	25 ppm	17 ppm
Iron	4 ppm	15 ppm	5 ppm	5 ppm	6 ppm
Sulphate	235 ppm	897 ppm	1389 ppm	834 ppm	1095 ppm
Chloride	30 ppm	80 ppm	100 ppm	70 ppm	120 ppm

1. All competitor samples are obtained from the Chinese market and may not represent the full capability of each producer  
 2. All samples are analysed by Wollongong University (Australia) on a comparable basis and method  
 3. Analysis performed by ICP on a comparative basis

Comparison Charts

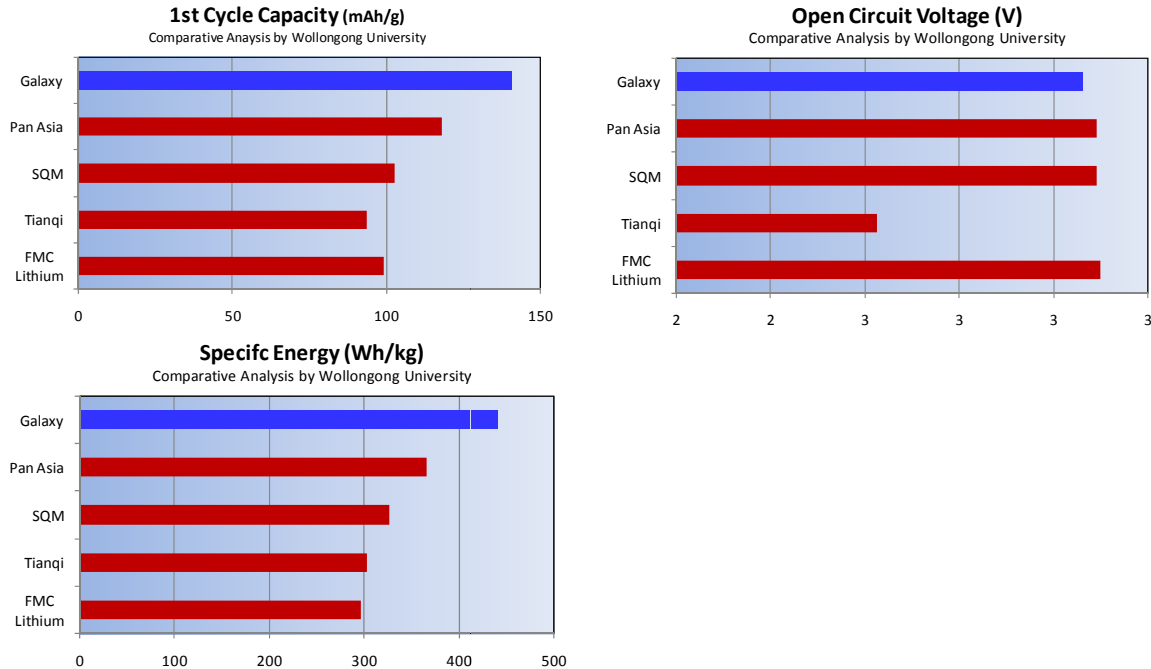


Cathode and Battery Testwork

The full benefit of the Company's 'EV Grade' lithium carbonate in cathode material and its subsequent performance in lithium batteries were further tested by the University of Wollongong.

Galaxy's products, together with the other competitor products were used to produce various Lithium Iron Phosphate (LFP) cathode materials by conventional solid-state reaction process. LFP cathode is a popular cathode type used in lithium ion batteries today. Various electrochemical performance tests were subsequently conducted on these cathode materials to assess the most effective battery grade lithium carbonate product. These tests include first charge capacity; open circuit voltage; specific energy, and short circuit current, which relates to how well the cathode performs in a battery.

The following graphics demonstrate the superior characteristics of Galaxy's EV Grade product in coin cell performance.

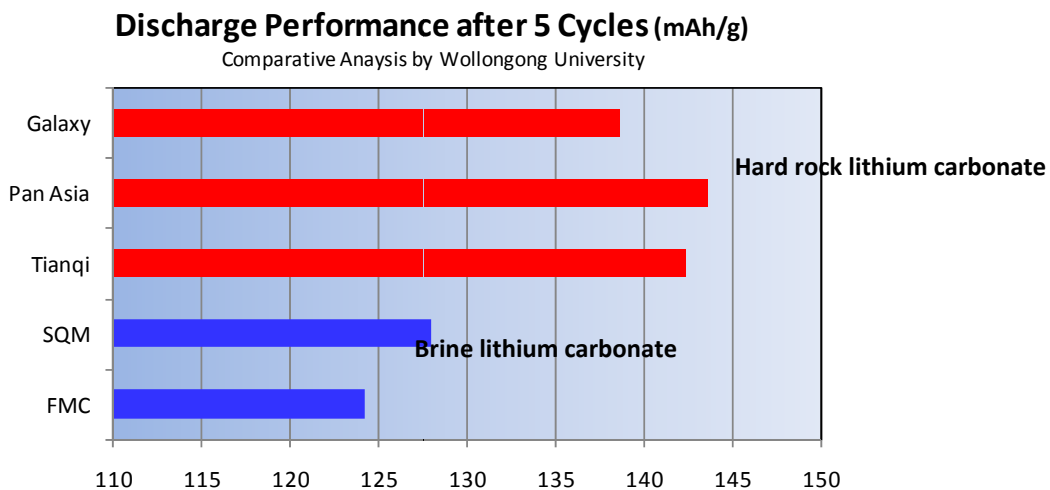


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**Battery Discharge (Coin Cell) Performance Tests**

The following tests conducted by Wollongong University, measures the amount of fade in the cycle life capacity of the coin cells after a series of charge and discharge cycles. Coin cells with little fade, holding its charge after many cycles are favoured as an ideal lithium cathode material. The tests shows that there is practically no fade in the cycle life capacity using Galaxy's EV Grade lithium carbonate compared with other competitor battery grade lithium carbonate samples.

Interestingly, the Wollongong test work also identified that **hard rock based lithium carbonate outperformed the brine based lithium carbonate** in battery cycle life capacity test work. This supports anecdotal views in the Chinese lithium battery industry about the advantages and preference of hard rock based lithium carbonate.





In summary, the Galaxy 'EV Grade' lithium carbonate electrochemical characteristics, in most tests, outperformed all other competitors' battery grade lithium carbonate. In addition, based on the Wollongong University comparative test work, hard rock based lithium carbonate seems to perform better in battery cycle performance compared with brine based lithium carbonate.

Mr Tan said the results, produced under laboratory conditions indicated Galaxy's capacity to produce high product purity with the potential for further quality improvements once the large scale, highly automated process was applied.

"With this plant modification, Galaxy can guarantee its customers consistent supply of a high purity product on a long term basis," he said.

"The process change is effectively a 'bolt on' addition to the back of the plant and involves adding some simple supplementary vessels, equipment and pipework, none of which is expected to result in significant changes to capital or operating costs."

Galaxy's EPCM contractor at Jiangsu, Hatch, is still to receive some outstanding tenders ahead of finalising the construction budget and completion schedule. All of the critical path equipment supply and contracts have already been implemented.

The Company expects to announce the final construction budget and plan in early October 2010.



Artist Impression of Jiangsu Lithium Carbonate Plant

#### Caution Regarding Forward Looking Statements

This document includes "forward-looking statements". These can be identified by words such as "may", "should", "anticipate", "believe", "intend", "estimate" and "expect" and includes references to certain intentions, expectations, and plans of Galaxy regarding its mineral properties, processing facilities and operations, and the sale and marketing of its products. Forward-looking statements are based on assumptions regarding Galaxy's financial position, business strategies, plans and objectives of management for future operations and development and the environment in which Galaxy will operate. These forward-looking statements are based on current views, expectations and beliefs as at the date they are expressed. They involve known and unknown risks, uncertainties and other factors which could cause the actual results, performance or achievements of Galaxy to be materially different from those expressed or implied by the forward-looking statements. Accordingly, there can be no assurance or guarantee that these statements, estimates or projections will be realised. They should not be taken as implying that the assumptions on which the projections have been prepared are correct or exhaustive.

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### **About Galaxy (ASX: GXY)**

Galaxy Resources is a Western Australian S&P / ASX 300 Index company which is soon to become one of the world's leading producers of lithium – the essential component for powering the world's fast expanding fleet of hybrid and electric cars.

By 2010, GXY's Mt Cattlin mine will be the world's second largest hard rock producer of lithium and, through the development of its value adding lithium carbonate plant (17,000 tpa), the Company will be the largest and lowest cost lithium producer in China.

Lithium concentrate and lithium carbonate materials are forecast to be in short supply against high future demand due to advances in long life batteries and sophisticated electronics including mobile phones and computers.

Galaxy Resources has positioned itself to meet this lithium future by not only mining the lithium but by downstream processing to supply lithium carbonate to the lucrative Asian market.